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United States Patent [19][11] **Patent Number:** **5,217,483****Tower**[45] **Date of Patent:** **Jun. 8, 1993****[54] INTRAVASCULAR RADially EXPANDABLE STENT****[75] Inventor:** Allen J. Tower, North Lawrence, N.Y.**[73] Assignee:** Numed, Inc., Hopkinton, N.Y.**[21] Appl. No.:** 883,346**[22] Filed:** May 15, 1992**Related U.S. Application Data****[63]** Continuation of Ser. No. 619,010, Nov. 28, 1990, Pat. No. 5,161,547.**[51] Int. Cl.⁵** A61M 29/00**[52] U.S. Cl.** 606/198; 623/1; 623/12**[58] Field of Search** 606/108, 198, 191; 623/1, 12**[56] References Cited****U.S. PATENT DOCUMENTS**

4,313,231 2/1982 Koyamada .
4,503,569 3/1985 Dotter .
4,617,332 10/1986 Salyer et al. .
4,733,665 3/1988 Palmaz .
4,739,762 4/1988 Palmaz .

4,776,337 10/1988 Palmaz .
4,793,348 12/1988 Palmaz .
4,820,298 4/1989 Leveen et al. .
4,830,003 5/1989 Wolff et al. .
4,856,516 8/1989 Hillstead .
4,886,062 12/1989 Wiktor .
5,019,090 5/1991 Pinchuk .

OTHER PUBLICATIONS

"A View of Vascular Stents", Richard A. Schatz, MD, Circulation, 1989; 79:445-457.

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[57] ABSTRACT

An improved radially expandable stent formed from a fine wire bent into a serpentine flat ribbon which is wound around a mandrel into a cylindrical sleeve for mounting on a balloon catheter for transluminal insertion in a vessel such as a blood vessel is provided. A very small diameter fine platinum wire is used to form the basic cylindrical sleeve and it is welded to a pigtail of the wire forming the sleeve to provide longitudinal stability.

5 Claims, 1 Drawing Sheet